

What is claimed is:

- 1 1. A bone plate with a longitudinal axis, a bone-contacting bottom side and a top side with at least one set
2 of overlapping holes which communicate through the plate from the top to the bottom side, wherein the at
3 least one set of overlapping holes defines a threaded aperture having multifaceted surfaces.
- 1 2. The bone plate of claim 1, wherein the overlapping holes are formed normal to the top side of the plate.
- 1 3. The bone plate of claim 1, wherein the overlapping holes are formed at an angle offset from normal to
2 the top side of the plate.
- 1 4. The bone plate of claim 1, wherein at least one of the overlapping holes is formed normal to the top side
2 of the plate and at least a second of the overlapping holes is formed at an angle offset from normal to the
3 top side of the plate.
- 1 5. The bone plate of claim 1, wherein the multi-faceted surface is a coaxial series of annular grooves.
- 1 6. The bone plate of claims 1, wherein the threaded aperture further comprises multiple sets of
2 overlapping holes.
- 1 7. The bone plate of claim 6, wherein the overlapping holes are formed normal to the top side of the plate.
- 1 8. The bone plate of claim 6, wherein the overlapping holes are formed at an angle offset from normal to
2 the top side of the plate.
- 1 9. The bone plate of claim 6, wherein at least one of the overlapping holes is formed normal to the top side

2 of the plate and at least a second of the overlapping holes is formed at an angle offset from normal to the
3 top side of the plate.

1 10. The bone plate of claim 6, wherein the multiple sets of overlapping holes are aligned on the axis.

1 11. The bone plate of claim 6, wherein the multiple sets of overlapping holes are positioned in a staggered
2 arrangement from the longitudinal axis.

1 12. The bone plate of claim 11, wherein the overlapping holes are formed normal to the top side of the
2 plate.

1 13. The bone plate of claim 11, wherein the overlapping holes are formed at an angle offset from normal
2 to the top side of the plate.

1 14. The bone plate of claim 11, wherein at least one of the overlapping holes is formed normal to the top
2 side of the plate and at least a second of the overlapping holes is formed at an angle offset from normal to
3 the top side of the plate.

1 15. The bone plate of claim 1, wherein the multi-faceted surface is a threaded surface.

1 16. The bone plate of claim 15, wherein the overlapping holes are formed normal to the top side of the
2 plate.

1 17. The bone plate of claim 15, wherein the overlapping holes are formed at an angle offset from normal
2 to the top side of the plate.

- 1 18. The bone plate of claim 15, wherein at least one of the overlapping holes is formed normal to the top
2 side of the plate and at least a second of the overlapping holes is formed at an angle offset from normal to
3 the top side of the plate.
- 1 19. The bone plate of claim 1 wherein the set of overlapping holes is adapted to receive a bone screw with
2 a head and a bone-engaging thread.
- 1 20. The bone plate of claim 19, wherein the head of the bone screw has a plate engaging thread.
- 1 21. The bone plate of claim 19, wherein the overlapping holes are formed normal to the top side of the
2 plate.
- 1 22. The bone plate of claim 19, wherein the overlapping holes are formed at an angle offset from normal
2 to the top side of the plate.
- 1 23. The bone plate of claim 19, wherein at least one of the overlapping holes is formed normal to the top
2 side of the plate and at least a second of the overlapping holes is formed at an angle offset from normal to
3 the top side of the plate.
- 1 24. The bone plate of claim 1 wherein the set is comprised of two overlapping holes.
- 1 25. The bone plate of claim 24, wherein the overlapping holes are formed normal to the top side of the
2 plate.
- 1 26. The bone plate of claim 24, wherein the overlapping holes are formed at an angle offset from normal

2 to the top side of the plate.

1 27. The bone plate of claim 24, wherein at least one of the overlapping holes is formed normal to the top
2 side of the plate and at least a second of the overlapping holes is formed at an angle offset from normal to
3 the top side of the plate.

1 28. The bone plate of claim 1, wherein the set is comprised of three overlapping holes.

1 29. The bone plate of claim 28, wherein the overlapping holes are formed normal to the top side of the
2 plate.

1 30. The bone plate of claim 28, wherein the overlapping holes are formed at an angle offset from normal
2 to the top side of the plate.

1 31. The bone plate of claim 28, wherein at least one of the overlapping holes is formed normal to the top
2 side of the plate and at least a second of the overlapping holes is formed at an angle offset from normal to
3 the top side of the plate.

1 32. An orthopaedic kit including:

2 a. a bone plate with a longitudinal axis, a bone-contacting bottom side and a top side with at
3 least one set of overlapping holes which communicate through the plate from the top to the bottom side,
4 the overlapping holes defining a threaded aperture having multifaceted surfaces; and

5 b. at least one bone screw engageable with the bone plate.

1 33. The kit of claim 32, further comprising a drill guide having a main drill guide surface and opposite end
2 portions, one end portion of which is securely engageable with the multi-faceted surface of a hole in the

3 bone plate so as to securely hold the drill guide in a desired orientation with respect to the bone plate for
4 stabilizing a drill used in an orthopaedic procedure.

1 34. A bone plate with a longitudinal axis, a bone-contacting bottom side and a top side with a plurality of
2 sets of overlapping holes which communicate through the plate from the top to the bottom side, wherein
3 the set of overlapping holes have threads adapted to receive a bone screw with a threaded head and a bone
4 engaging threaded shank.

1 35. A bone plate with a longitudinal axis, a bone-contacting bottom side and a top side with a plurality of
2 sets of overlapping holes which communicate through the plate from the top to the bottom side, the
3 overlapping holes having threaded surfaces adapted to receive bone screws with a threaded head and a
4 bone engaging threaded shank, wherein the overlapping holes have centers substantially aligned along the
5 longitudinal axis of the plate.

1 36. A bone plate with a longitudinal axis, a bone-contacting bottom side and a top side with a plurality of
2 threaded apertures communicating through the plate from the top to the bottom side, at least one of the
3 threaded apertures comprised of overlapping holes having a threaded surface adapted to receive a bone
4 screw with a head and a bone engaging thread, the overlapping holes further having centers staggered
5 about the longitudinal axis of the plate.

1 37. A bone plate with a longitudinal axis, a bone-contacting bottom side having a total area and a top side
2 with a plurality of threaded apertures which communicate through the plate from the top side to the
3 bottom side, at least one of which is a set of overlapping holes, wherein the overlapping holes have
4 multifaceted surfaces and wherein the bottom side includes recesses located between adjacent threaded
5 apertures and which are substantially located exclusively on the bottom side, the recesses being sized so as
6 to define a cross-section transverse to the longitudinal axis and across the recesses that ensures that a yield
7 strength in bending across the recesses is less than across a threaded aperture.

1 38. The bone plate of claim 37, wherein the recesses are substantially rectangular in form.

- 1 39. The bone plate of claim 37, wherein the recesses are equally spaced along the longitudinal axis.
- 1 40. The bone plate of claim 37, wherein the total area removed from the bottom side due to the recesses is
2 less than or equal to 50% of the total surface area of the bottom side.
- 1 41. The bone plate of claim 37, wherein the recesses are transverse and extend across the width of the
2 bone plate.
- 1 42. The bone plate of claim 37, wherein the recesses extend from a side of the bone plate transversely
2 toward the longitudinal axis but do not cross the axis.